

**CLAIMS**

What is claimed is:

- 1           1.       A heat dissipation apparatus, comprising:  
2           a heat sink that is adapted to receive a processor mounted thereto, the heat sink  
3       comprising an internal chamber that is adapted to receive a fluid flow that removes  
4       heat from the heat sink.
  
- 1           2.       The apparatus of claim 1, further comprising at least one hollow prong  
2       that extends from the heat sink, the at least one hollow prong being in fluid  
3       communication with the internal chamber of the heat sink such that fluid forced into  
4       the internal chamber flows through the at least one hollow prong.
  
- 1           3.       The apparatus of claim 2, wherein the at least one hollow prong  
2       comprises a cylindrical tube having an internal passage, the internal passage being in  
3       fluid communication with the internal chamber of the heat sink.
  
- 1           4.       The apparatus of claim 2, wherein the heat sink comprises a top surface  
2       and wherein the at least one hollow prong extends from the top surface of the heat  
3       sink.

1           5.       The apparatus of claim 2, further comprising a fan that is positioned  
2       such that fluid forced from the fan flows over external surfaces of the at least one  
3       prong.

1           6.       The apparatus of claim 5, wherein the fan is part of an external flow  
2       fan module that is mounted to the heat sink.

1           7.       The apparatus of claim 1, further comprising an inlet that is in fluid  
2       communication with the internal chamber of the heat sink such that fluid forced into  
3       the inlet flows into the internal chamber.

1           8.       The apparatus of claim 7, further comprising a fan that is in fluid  
2       communication with the inlet.

1           9.       The apparatus of claim 7, wherein the fan comprises part of an internal  
2       flow fan module that is mounted to the heat sink.

1           10.      The apparatus of claim 1, wherein the heat sink comprises a bottom  
2       surface that is adapted to receive a processor.

1           11.      The apparatus of claim 1, wherein the heat sink comprises a top plate  
2       and a bottom plate that together form the internal chamber.

1           12.     A heat dissipation apparatus, comprising:  
2           a heat sink that is adapted to receive a processor mounted thereto, the heat sink  
3 comprising an internal chamber;  
4           hollow prongs that extend from the heat sink, the hollow prongs being in fluid  
5 communication with the internal chamber of the heat sink; and  
6           an inlet that is in fluid communication with the internal chamber of the heat  
7 sink;  
8           wherein fluid forced into the inlet flows into the internal chamber of the heat  
9 sink and then through the hollow prongs to exit the heat dissipation apparatus.

1           13.     The apparatus of claim 12, wherein the heat sink comprises a top  
2 surface and a bottom surface, the hollow prongs extending from the top surface and  
3 the bottom surface being adapted to receive a processor.

1           14.     The apparatus of claim 13, further comprising an interior flow fan  
2 module that is in fluid communication with the inlet and mounted to the heat sink, the  
3 interior flow fan module being configured to force fluid into the inlet.

1           15.     The apparatus of claim 14, further comprising an exterior flow fan  
2 module mounted to the top surface of the heat sink, the exterior flow fan module  
3 being configured to force fluid over exterior surfaces of the hollow prongs.

1           16.    The apparatus of claim 15, wherein the inlet is defined by a flow  
2   director that is positioned between the interior flow fan module and the exterior flow  
3   fan module.

1           17.    A heat dissipation apparatus, comprising:  
2           means for transmitting heat away from a processor;  
3           means for enabling flow of fluid through the means for transmitting heat away  
4   from a processor; and  
5           means for enabling flow of fluid over the means for transmitting heat away  
6   from a processor.

1           18.    The apparatus of claim 17, wherein the means for transmitting heat  
2   comprise a heat sink.

1           19.    The apparatus of claim 18, wherein the means for enabling flow of  
2   fluid through the means for transmitting heat comprise an internal chamber of the heat  
3   sink and an inlet that is in fluid communication with the internal chamber.

1           20.    The apparatus of claim 19, wherein the means for enabling flow of  
2   fluid through the means for transmitting heat further comprise an internal flow fan  
3   module that is mounted to the heat sink and in fluid communication with the inlet.

1           21.    The apparatus of claim 17, wherein the means for transmitting heat  
2   comprise at least one hollow prong.

1           22.    The apparatus of claim 21, wherein the means for enabling flow of  
2   fluid through the means for transmitting heat comprise an internal passage of the at  
3   least one hollow prong.

1           23.    The apparatus of claim 22, wherein the means for enabling flow of  
2   fluid over the means for transmitting heat comprise an external flow fan module.

1           24.    A method for dissipating heat generated by a processor, the method  
2   comprising:

3           forcing fluid through an internal chamber formed within a heat sink to which  
4   the processor is mounted;

5           forcing the fluid from the internal chamber of the heat sink through at least one  
6   hollow prong that extends from the heat sink and that is in fluid communication with  
7   the internal chamber of the heat sink; and

8           forcing fluid over exterior surfaces of the at least one hollow prong.

1           25.    The method of claim 24, wherein forcing fluid through an internal  
2   chamber comprises forcing air into the internal chamber using a fan module that is  
3   mounted to the heat sink.

1           26.     The method of claim 24, wherein forcing fluid through an internal  
2     chamber comprises forcing air into the internal chamber using a fan that is separate  
3     from the heat sink.

1           27.     The method of claim 24, wherein forcing fluid over exterior surfaces of  
2     the at least one prong comprises forcing air over the at least one prong using a fan  
3     module that is mounted to the heat sink.

1           28.     The method of claim 24, wherein forcing fluid over exterior surface of  
2     the at least one prong comprises forcing fluid over exterior surfaces of the at least one  
3     prong using a fan that is separate from the heat sink.

1           29.     A computer, comprising:  
2             a processor; and  
3             a heat dissipation apparatus that includes a heat sink that is adapted to receive  
4     the processor, the heat sink comprising an internal chamber that is adapted to receive a  
5     fluid flow that removes heat from the heat sink.

1           30.     The computer of claim 29, wherein the heat dissipation apparatus  
2     further comprises at least one hollow prong that extends from the heat sink, the at  
3     least one hollow prong being in fluid communication with the internal chamber of the  
4     heat sink such that fluid forced into the internal chamber flows through the at least  
5     one hollow prong.

1           31.     The computer of claim 30, further comprising a fan that forces fluid  
2     over external surfaces of the at least one prong.

1           32.     The computer of claim 31, wherein the fan is part of an external flow  
2     fan module that is mounted to the heat sink.

1           33.     The computer of claim 29, wherein the heat dissipation apparatus  
2     further comprises an inlet that is in fluid communication with the internal chamber of  
3     the heat sink such that fluid forced into the inlet flows into the internal chamber.

1           34.     The computer of claim 33, further comprising a fan that is in fluid  
2     communication with the inlet.